

REMARKS

Reconsideration of this application is requested in view of the attached declaration evidence and the following comments.

Claim 9 has been canceled in favor of claim 8.

The Examiner has rejected applicants' claims 1-9 under 35 U.S.C. 103(a) as unpatentable over Gregory et al. (U.S. 5,374,301). Section 3, pages 2-4 of the action. The Examiner has also rejected claims 1-9 under Section 103(a) as unpatentable over Schaulin et al. (U.S. 5,328,995). Section 4, pages 4-5 of the action.

With respect, it is submitted that the applicants' invention, as defined by claims 1-9, is not obvious from either Gregory et al. or Schaulin et al. There is no motivation in the references to make the changes which are necessary to reach the applicants' invention. Furthermore, the applicants' compounds possess properties which are not in any sense obvious from the references. This is shown by the attached declaration of Dr. Gavin Wright, a highly experienced scientist in the field of colorants for ink-jet printing.

More specifically, and referring initially to the Examiner's rejection of claims 1-9 based on the Gregory et al patent, it is noted that the experiments detailed in the attached Wright declaration show that the presently claimed compounds have superior light fastness and ozone fastness properties as compared to even the closest examples in Gregory et al. These superior properties are entirely surprising and unpredictable.

Applicants' main claim (claim 1) differs from Gregory et al. in many ways. Starting from the generic structure of Formula (1) in Gregory et al. at Column 1, lines 15 to 20, the following steps must be taken in order to reach the applicants' claim 1:

- (1) Ar and Ar¹ must both be phenyl or naphthyl rather than any aryl group;
- (2) J and J¹ must be of Formula (2) rather than Formula (3) or (4);
- (3) X must be of Formula (5) rather than Formula (6) or (7)
- (4) Z must be NR⁸R⁹ rather than OR⁷ or SR⁷;
- (5) R⁸ must be H rather than any of the other possible groups mentioned at Column 2, lines 27 to 32;
- (6) R⁹ must be a substituted alkyl rather than any of the other possible groups mentioned at Column 2, lines 27 to 32;

(7) R⁹ must be substituted with a sulfo group rather than any of the other groups mentioned at Column 3, lines 26 to 28;

(8) N must be 0 rather than 1.

It is respectfully submitted that the person of ordinary skill has no motivation from Gregory et al. to take such a large number of steps in combination to reach the applicants' invention. Accordingly, it is respectfully submitted that claim 1, and dependent claims 2-9, are not obvious from Gregory et al., particularly when one takes into account the unobvious results obtained with the applicants' invention shown by the Wright declaration. Applicants' claim 1 represents a very narrow subset within the massive number of possible compounds encompassed in Gregory et al. and there is no teaching in Gregory et al. to make the narrow selections which are needed to reach the applicants' invention. In fact, if anything, Gregory et al. directs the person of ordinary skill in the art away from the present claims. Thus, the examples of U.S. 5,374,301 teach a preference for Z = alkanolamine or morpholino. (See Examples 1 to 6, 8 to 13 and 16 to 30).

Also, it is to be noted that other than Example 28 no example has a sulfo group anywhere in the compound. See also the table at Column 5, lines 20 to 35 which lists no sulfo containing components.

Thus, in summary, claim 1 and dependent claims 2-9 are not in any sense obvious from Gregory et al. because:

- (1) of the improved and unobvious light and ozone fastness as compared to the closest examples in Gregory et al. (see the Wright declaration);
- (2) of the many steps which must be taken to reach claim 1 from Gregory et al. when there is no motivation in Gregory et al. to make the needed selection; and
- (3) the examples in Gregory et al. point away from the present invention.

For all of these reasons, the applicants submit that the Section 103(a) rejection of claims 1-9 based on Gregory et al. should be withdrawn.

The same is true for the rejection based on Schaulin. This patent does not in any way make the applicants' invention obvious.

As is the case with Gregory et al., the experiments detailed in the attached Wright declaration show that the presently claimed compounds have superior light fastness and ozone fastness properties as compared to the closest example in Schaulin et al. These superior properties are entirely surprising and unpredictable.

Furthermore, as with Gregory et al., claim 1 differs from Schaulin et al. in several substantive ways. Thus, starting from the generic structure in Schaulin et al. at Column 1, lines 13 to 42, the following steps must be taken in order to reach applicants' claim 1:

- (1) n must be 0 rather than 1;
- (2) R₁ must be a mono alkyl amino moiety rather than any of the other possible groups mentioned at Column 1, lines 43 to 53;
- (3) R₁ must be substituted with a sulfo group rather than any of the other groups mentioned at Column 1, lines 46 to 47;
- (4) A¹ must be phenylene rather than naphthylene (see Column 1, lines 35 to 40);
- (5) the compound of Formula (1) must carry at least one carboxylic acid group. Thus, R₂, R₃ or optional group R₄ must be a carboxylic acid group which is only one of many possible groups disclosed in Schaulin et al.

It is respectfully submitted that the person of ordinary skill has no motivation to take such a large number of steps in combination to reach the applicants' invention. Accordingly, it is respectfully submitted that claim 1 is not obvious over Schaulin et al. Again, it is noted that claim 1 represents an extremely specific subset within the massive number of possible compounds encompassed by Schaulin et al. This subset is not suggested or taught to anyone of ordinary skill in the art and it is certainly not evident from the reference that the applicants' special subset would demonstrate the unexpectedly advantageous properties shown in the Wright declaration.

Schaulin et al. at Column 11, Table 1 lists many compounds within its scope. However, it can be clearly seen from the examples in Schaulin et al. that carboxy containing compounds are not preferred. Out of the first 30 examples, only two (Examples 29 and 12) have any carboxylic acid groups. In addition, the R group in Table 1 is morpholino or alkanolamine in all but 2 of the first 30 examples. This preference is exactly consistent with Gregory et al. and, as earlier noted, leads the person of ordinary skill, if anything, away from applicants' claim 1.

In summary, it is respectfully submitted that claim 1 and dependent claims 2-9 are not in any sense obvious from Schaulin et al. because:

- (1) of the unexpectedly improved light and ozone fastness as compared to the closest example in Schaulin et al., as shown by the Wright declaration;

(2) of the many steps which must be taken to reach the pending claim 1 from Schaulin et al.; and

(3) because the examples in Schaulin et al. point away from the present invention.

Consistent with the above, the applicants submit that the Section 103(a) rejection based on Schaulin et al. should be withdrawn for the reasons noted.

Favorable reconsideration with allowance is requested.

Respectfully submitted,

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